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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,749	10/19/2004	Daisuke Adachi	43890-700	4951
7590 McDermott Will & Emery 600 13th Street N W Washington, DC 20005-3096			EXAMINER RAYMOND, BRITTANY L	
			ART UNIT 1795	PAPER NUMBER
			MAIL DATE 09/29/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/511,749

**Applicant(s)**

ADACHI, DAISUKE

**Examiner**

BRITTANY RAYMOND

**Art Unit**

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 September 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,8-10 and 12 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1,2,8-10 and 12 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 19 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 1, 2, 8-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki (U.S. Patent 5008166) in view of Kim (U.S. Patent Publication 2003/0215747)

Aoki discloses a manufacturing method of a color filter comprising: forming a photosensitive dyeable layer over signal electrodes on a substrate, irradiating light onto a portion of the dyeable layer using a photomask, moving the photomask by a certain distance, and irradiating the dyeable layer with light a second time (Col. 5, Line 60-Col. 6, Line 26), as recited in claims 1, 2 and 12 of the present invention. Aoki also discloses that the distance the photomask is moved is set to a value larger than any dust that may adhere to the photomask (Col. 6, Lines 26-29), as recited in claims 1, 2

and 12 of the present invention. Aoki states that the mask can be moved in a longitudinal direction or by three pitches of the filter elements (Col. 6, Lines 21-24 and Col. 7, Lines 31-34), as recited in claims 2 and 12 of the present invention. Aoki also states that the photomask can essentially be moved in any way, if some of the corresponding filter elements are overlapped for exposure (Col. 8, Lines 47-49), as recited in claims 1, 2 and 12 of the present invention.

Aoki fails to disclose that the exposure method is used to form structures or electrodes of a plasma display panel, and that the electrodes are address electrodes, which are formed by exposing a photosensitive silver paste on a substrate.

Kim discloses a process of forming an address electrode on a plasma display panel comprising: printing the whole surface of a substrate with a photosensitive electrode paste, drying the paste, lining up a photomask corresponding to the electrode pattern, irradiating the paste to light through the photomask, applying a development solvent to the paste to remove non-exposed areas, and heating the paste to obtain the electrode (Paragraph 0047), as recited in claims 1, 2, 8-10 and 12 of the present invention. Kim also discloses that the photosensitive electrode paste comprises silver powder (Paragraph 0040), as recited in claims 8-10 of the present invention.

It would have been obvious to one of ordinary skill in the art, at the time of invention by applicant, to have formed electrodes on a plasma display panel using the process of Aoki, as suggested by Kim, because Kim teaches that structures on a plasma display are also formed by exposing and patterning a photosensitive layer through a photomask, which can be subjected to dust particles. It also would have been

obvious to one of ordinary skill in the art to have formed the electrodes with a silver paste, as suggested by Kim, because Kim teaches that silver is a common material used in the formation of accurate address electrodes of a plasma display panel.

***Response to Arguments***

3. Applicant's arguments, filed 9/10/2009, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, due to the amendments made to the claims, a new ground(s) of rejection is made in view of newly found prior art references.

Applicant argues that neither Peng nor Asano teach or suggest moving a photomask between successive exposures of a portion of a photosensitive material corresponding to one of the structures of the plasma display panel. The reference, Aoki, has been added to teach a process of performing two exposures through a single photomask on a photosensitive layer and moving the photomask a certain distance in between the two exposures. Aoki also teaches that the photomask can be moved a small distance in a longitudinal direction or by 3 pitches of the pattern in an orthogonal direction. Aoki states that the photomask can be moved in any way, if some of the corresponding filter elements are overlapped for exposure. Aoki also states that the process is performed in order to prevent dust particles on the photomask from being transferred to the patterned layer.

The reference, Kim, has been added to teach that electrodes on a plasma display panel are also formed by depositing a photosensitive layer on a substrate and exposing the layer to light through a photomask. Therefore, the problem of dust

particles on the photomask can also occur in the process of forming a plasma display panel. Kim also teaches that the process forms address electrodes, and that the photosensitive layer contains silver powder.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRITTANY RAYMOND whose telephone number is (571)272-6545. The examiner can normally be reached on Monday through Friday, 8:30 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/Kathleen Duda/  
Primary Examiner, Art Unit 1795**

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